

AMENDMENT UNDER 37 C.F.R. § 1.111

U.S. Appl. No. 09/722,306

Attorney Docket Q61090

REMARKS**General remarks.**

Applicant herein amends the specification to correct some minor informalities and to more completely harmonize the reference numerals in the drawing figures with those mentioned in the specification. No new matter has been added.

Applicant encloses as an Appendix a replacement formal drawing sheet containing Fig. 14, in which the informalities mentioned by the Examiner have been corrected. In view of this, Applicant respectfully requests the Examiner to withdraw the objection to Fig. 14.

Claims 1-4 are all the claims pending in the application. Claims 1 and 2 have been amended to clarify and broaden the language of the claims, and to overcome the rejection under 35 U.S.C. §112, ¶2. Applicant respectfully requests the Examiner to withdraw the §112 rejection in view of the above-identified claim amendments.

The prior art rejection.

The Examiner rejected claims 1-4 under 35 U.S.C. § 102 (b) as being anticipated by Utan et al. (USP 5,586,335). Applicant respectfully traverses this rejection, first with respect to independent claim 1, in view of its requirement for:

circuit pattern extracting means for making a comparison between a circuit element of the circuit pattern being input and a corresponding circuit element contained in one of the plurality of previously stored circuit patterns stored in said unavailable area, and extracting from the plurality of previously stored circuit patterns an extracted circuit pattern in which the comparison indicates agreement between the compared circuit elements;

It is respectfully submitted that Utan does not meet this requirement.

In Utan, there is taught a system for ladder circuit editing. Utan notes two problems with prior approaches. One problem is that it is hard to enter logical expressions in the prior

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approaches. The other problem is that, when you retrieve a circuit pattern from the library, the device numbers are all wrong.

Utan's solution to the former problem is not really of concern at the present, but Utan's solution to the latter problem is of concern because the Examiner seems to be basing the prior art rejection of claim 1 on Utan's teachings in this regard. Applicant therefore discusses Utan's solution to the problem of wrong device numbering in stored circuit patterns to show the differences between this prior art teaching and the invention now claimed.

The previously stored circuit patterns in Utan are called "already-registered common ladder diagram portions" (column 4, lines 20-21). A library of these patterns can be built up. One such pattern is graphically illustrated in Fig. 13 (the top part of the figure -- reference numeral 51). This pattern is retrieved from the library with device numbers already fixed (i.e., FD0 for fixed device 0, FD1 for fixed device 1, and so on; see column 7, lines 4-7).

For the purposes of a ladder circuit being prepared by an operator, however, these fixed FD names must be changed to the correct names (like XD00, XD01, as shown in Fig. 13 at reference numeral 52). Utan teaches a good way to ease the task of changing the fixed device numbers to the so-called actual device numbers (column 7, line 12 to column 8, line 10).

In brief, Utan teaches the use of a setting screen (Fig. 12) whereby an operator can himself indicate the correspondences between individual circuit elements in the stored circuit pattern (the "common ladder diagram") and individual circuit elements in the actual. These correspondences are stored in a table and used to make the task of changing from the FD numbers to the desired device numbers.

The invention as claimed in claim 1, however, is different in that there is a requirement for making comparisons, between a pattern being input and stored patterns, to identify an extracted circuit pattern that can be used. That is to say, the invention described in the claim has to do with helping to determine which of the stored patterns is to be selected.

In contrast, Utan deals with the different problem of determining how to name the circuit elements *after* a particular stored pattern has already been selected. Utan's teachings as to how to determine which of the stored patterns is to be selected is summed up in step S22 of Utan's Fig.

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10. That step is where the operator specifies the common ladder diagram to be used. In other words, the operator has to know which stored pattern he wants, or has to go figure out which one to use somehow, but the Utan ladder circuit editing system does not help the operator with that task.

The Utan approach to determining which of the stored patterns is to be selected is really just a good example of the related approaches described on page 2 of Applicant's originally-filed specification. The problem with Utan's system is the same as the problem suffered by those other systems:

However, according to the foregoing related arts, an operator must intentionally extract or store a basic unit circuit pattern. This is inconvenient. Moreover, when a basic unit circuit pattern registered in advance is used to edit a sequence program, an operator must select the intended basic unit circuit pattern from numerous basic unit circuit patterns stored in the form of a library.

In column 7 of Utan, lines 42-44, the operator's task is clear: "the serial number of the common ladder diagram, to be retrieved from the auxiliary storage device (23) is specified." The operator (and not the system) decides what circuit pattern is to be retrieved from storage.

Claim 1, however, includes requirements for a circuit pattern extracting means, and such a means is not taught or suggested by Utan as evidenced by the foregoing points. Since Utan does not contain any teaching or suggestion that meets the requirements for the circuit pattern extracting means as set forth in claim 1, it cannot be said that Utan anticipates claim 1 within the meaning of 35 U.S.C. § 102. Furthermore, Applicant respectfully finds in Utan no teaching or suggestion that would have encouraged or enabled the artisan of ordinary skill to have modified the Utan system so as to include the unmet requirements of claim 1. Therefore, Applicant respectfully requests the Examiner to withdraw this rejection with respect to claim 1, as now amended, and also with respect to dependent claims 2-4.

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Conclusion and request for telephone interview.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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